The Making-of

Banja rendering : a 3D cartoon on the Internet

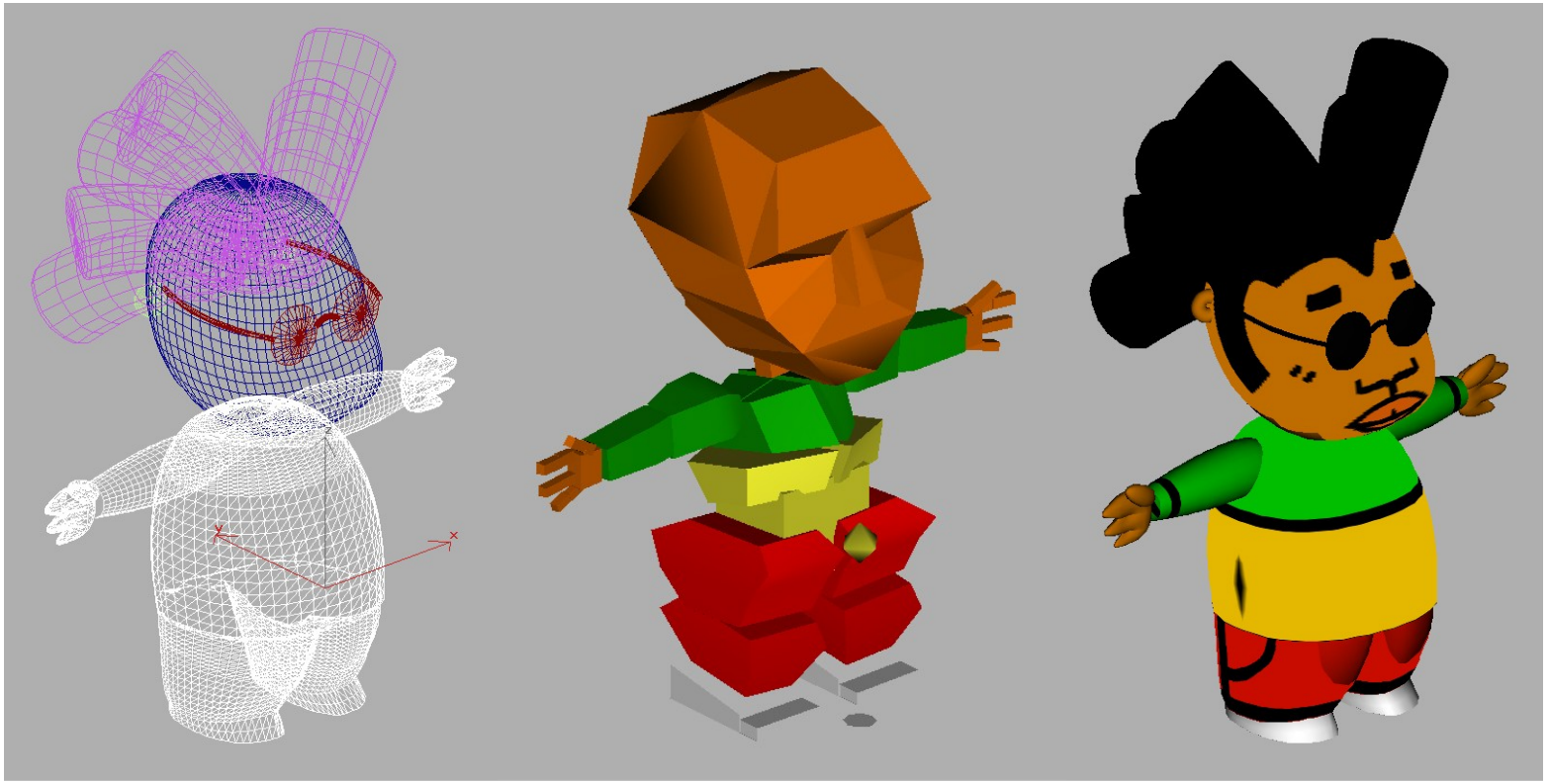
The Banja game's 3D rendering is of exceptional quality on the Internet. This unique aspect is due to particularly meticulous work. In the initial phase, all the graphics are conceived and drawn by hand. The 2D designers provide rough sketches and model sheet to the 3D modellers. A 3D modelling of the subject is then made with 3DSMax.

Obtaining a 3D-like cartoon rendering in Flash is not an easy task. It is a delicate operation which consists in converting the 3D in a black & white model to import it with all its shadows and relief in Flash. The final operations consist in re-colorizing the drawing and adding 2D effects or animations (like character's expressions) with the Macromedia software. It is a repetitive and laborious task, very frustrating for 2D designers who would rather focus on creative activities.

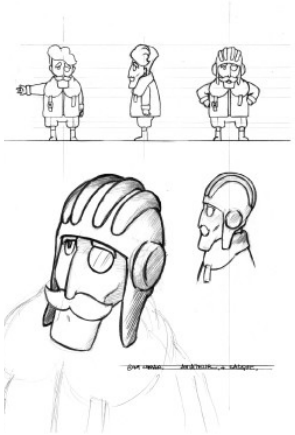
In order to optimise the production process and save designers' time we developed internally a production tool that handles automatically vectorization and colouring process.

A specifically developed production tool

Steps from rough sketch to final vector rendering

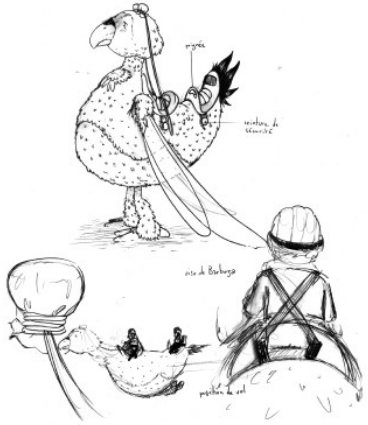


3D Modelling process

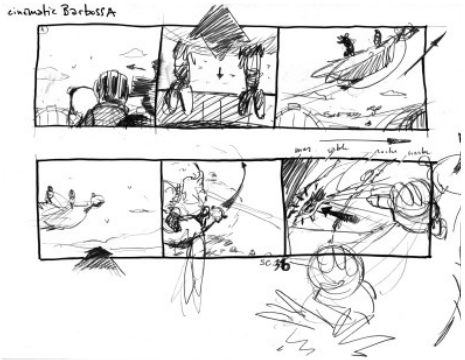


Croquis pour modélisation 3D

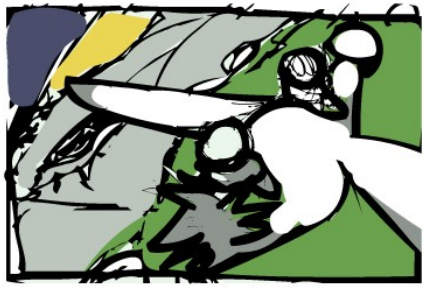
Rendu final après retouches sous Flash5 du rendu 3D colorisé.



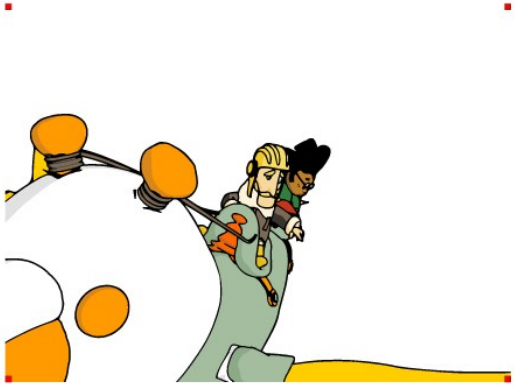
Divers croquis pour modélisation de l'oiseau de Barbosa.



STORY BOARD Rapide...



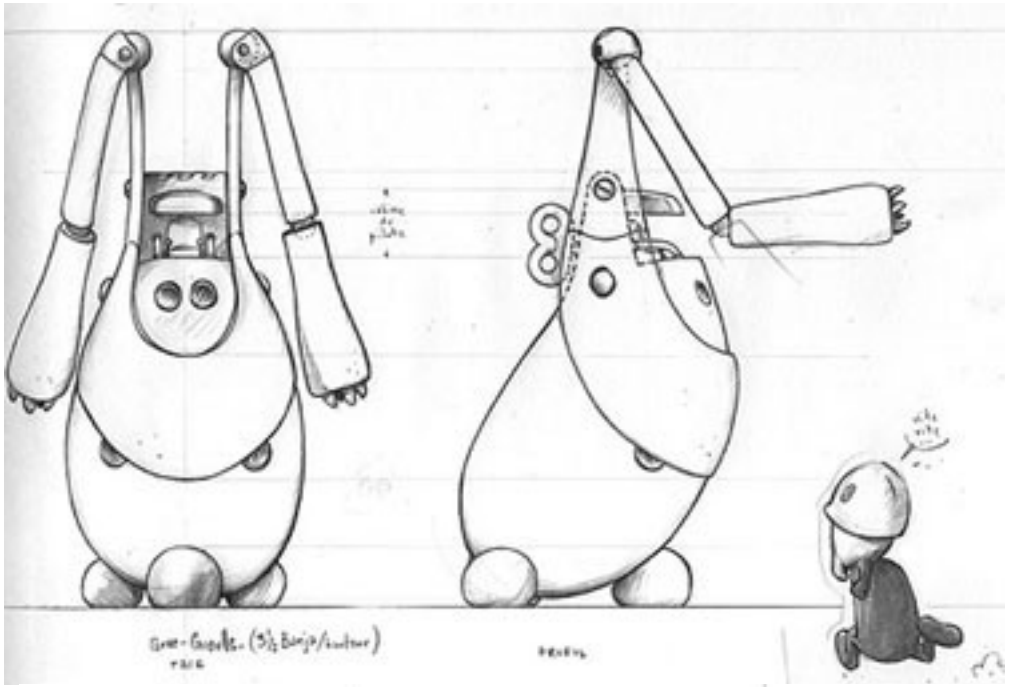
STORY BOARD monté rapidement sous Flash5 pour une première vision de l'animation avant de décider des rendus nécessaires en 3D. Chaque élément animé et non animé sera calculé sur des calques différents en vue de l'animation Flash.

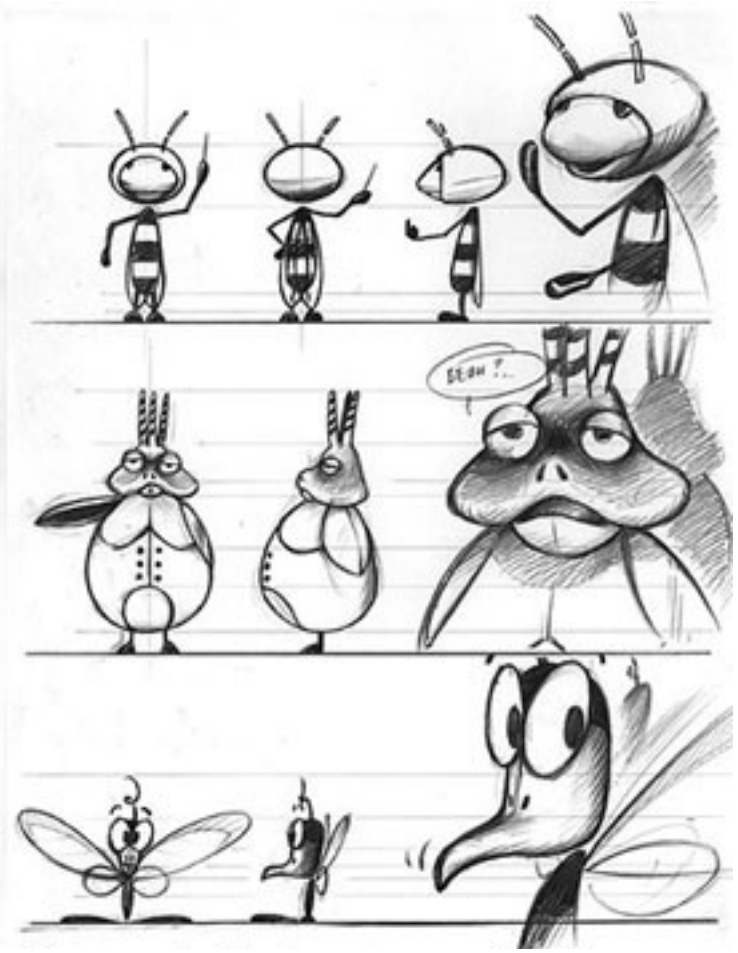


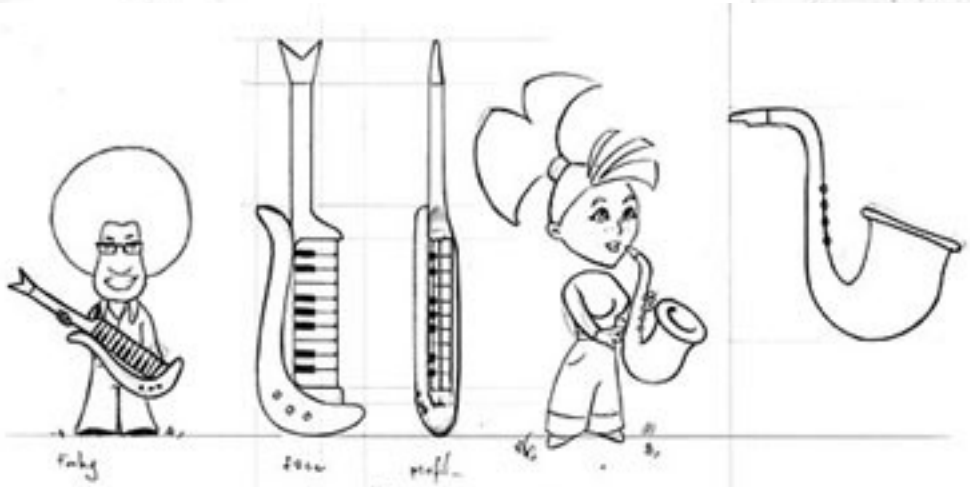
RENDU 3D COLORISÉ importé sous Flash5.

Scène pour animation après retouches / apports...

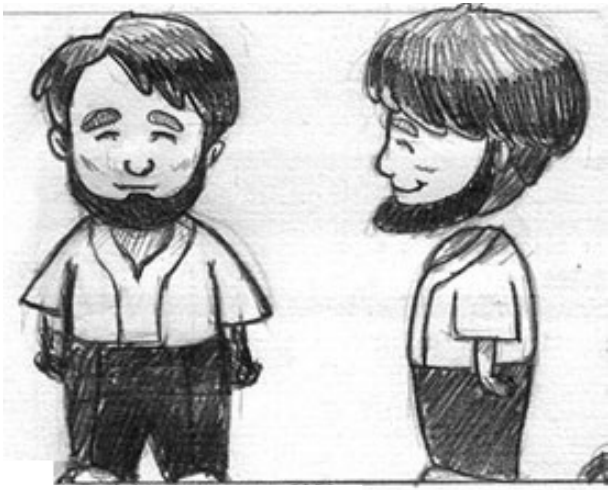
Production process

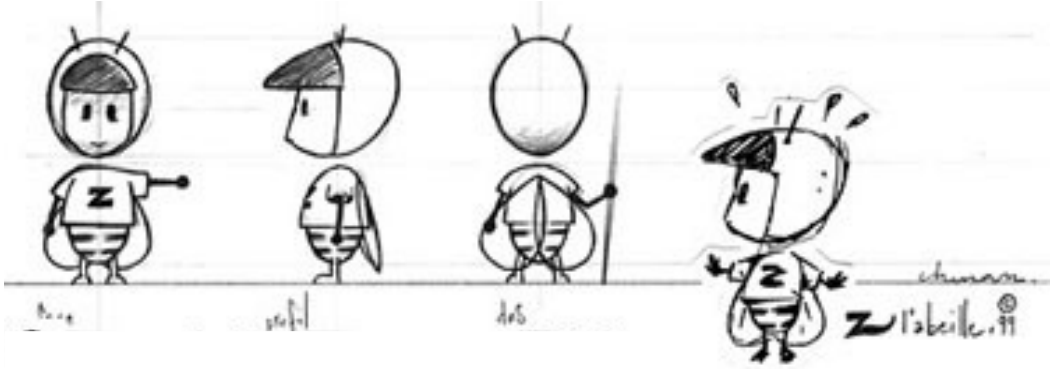


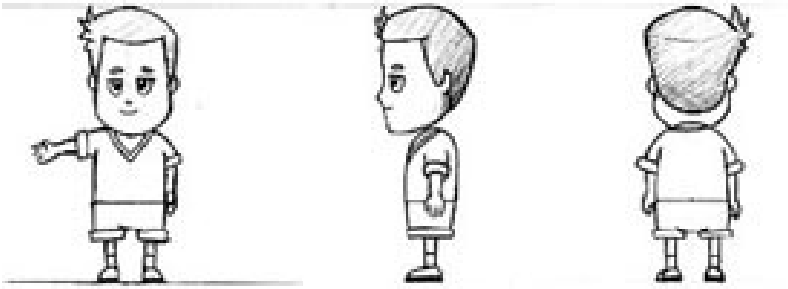




Original rough sketches







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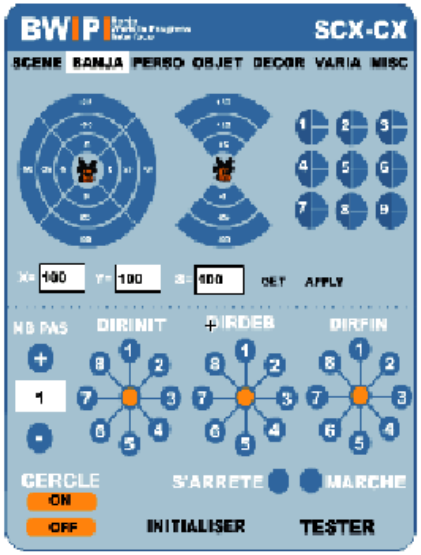

The creation of Banja required the elaboration of several specific production tools, in the cinematographic sense of the term. Thus the "BWIPI" (Banja Work In Progress Interface) tool that allows in the final phase to achieve all the camera movements (zooms, travelling...) in Flash, to manage the motions of characters and objects in the scene. In its "BWIPI online" version, it allows all game's elements to be remotely administered from the server: new events, new scenes, and new objects...

BWIPI off line is a **FLASH software overlay**. It brings additional developing tools to the Macromedia software in the various achievement phases of an on-line game, while remaining natively compatible, because it is programmed under FLASH. BWIPI off line thus operates up to now in correlation with FLASH. Thus the import of the world's construction elements at graphic and sound level are integrated in the project by using the functions of FLASH.

BWIPI off line allows programming the moves and the interactions with the player's environment. For example, to set out the settings, and place the objects and characters for that setting, we use the BWIPI off line tools to organise all that, and define the interactions, the displacement areas, etc.

It is also a **performing navigation system:** The experience with flash has allowed us to set up a navigation system that improves the interactivity. This displacement motor allows the player to freely direct his character in the scene. It also allows considerably enriching the world through the use of new functions such as the possibility of interacting with some of the elements, of composing scenes on several depth levels, of integrating effects.